

CLAIMS:

1. A display panel comprising a first substrate (2; 102) and a second substrate (3; 103) being separated from each other by spacers (4; 104) and sealing between them a space (7), at least one of the spacers (4; 104) being penetrated by a hole extending therethrough and through both of the substrates (2, 3; 102, 103) to form a through hole (5; 105; 205; 215) through the display panel (1; 100; 200), said at least one of the spacers (4; 104) and the substrates (2, 3; 102, 103) forming the wall (6; 106) of said through hole (5; 105) and sealing the space (7) from the through hole (5; 105).
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2. A display panel according to claim 1, in which each spacer (4) having a through hole (5) is located outside the pixel areas (11) of the display panel (1).
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3. A display panel according to claim 1 or 2, in which a plurality of through holes (5; 205), each extending through a respective one of the spacers (4) and through both of the substrates (2, 3) to form a through hole (5; 205) through the display panel (1; 200), are distributed over the surface (218) of the display panel (1; 200).
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4. A display panel according to any one of claims 1-3, in which the spacers (4; 104) are made of a visually decorative material.
5. A display panel according to any one of claims 1-4, in which the display panel is an LCD-display (1; 100; 200), a foil display, an electro-wetting display, a polyled display, a fluorescent display, or a touch screen or pressure-sensitive display.
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6. A display panel according to any one of claims 1-5, in which the display panel (100; 200) is flexible or bendable and/or has flexible substrates.
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7. A display panel according to any one of claims 1-6, in which the display panel (100) has a plastic (102, 103) or steel substrate.

8. A display panel according to any one of claims 1-7, in which the display panel (200) is adapted to be integrated in a wearable product.

9. A method of manufacturing a display panel, comprising the steps of
5 providing spacers (4; 104) on one side (17; 117) of a first substrate (2; 102),
providing a second substrate (3; 103) on said one side (17; 117) of the first
substrate (2; 102) such that the spacers (4; 104) hold the first and the second substrates (2, 3;
102, 103) separated from each other,

10 forming a hole (5; 105) through at least one of the spacers (4; 104) and both of
the substrates (2, 3; 102, 103) such that said at least one of the spacers (4; 104) and the
substrates (2, 3; 102, 103) form the wall (6; 106) of the through hole (5; 105), and
sealing a space (7; 107) between the substrates (2, 3; 102, 103) and the spacers
(4; 104).

15 10. A method according to claim 9, in which said through hole (5; 105) is formed
after the step of providing the second substrate (3; 103) on said one side (17; 117) of the first
substrate (2; 102).

20 11. A method according to claim 9, in which a liquid crystalline material (10) is
sealed between the substrates (2, 3; 102, 103) and the spacers (4; 104) after the step of
forming said through hole (5; 105).

25 12. A method according to claim 9, in which a liquid crystalline material (10) is
sealed between the substrates (2, 3; 102, 103) and the spacers (4; 104) before the step of
forming said through hole (5; 105).

13. A method according to claim 9, in which said through hole (5; 105) is formed
by a method chosen among stamping, mechanical drilling, laser drilling, powder blasting and
water jetting.

30 14. A method according to any one of claims 9-13, in which the spacers (104) are
made by ink jet printing monomers, polymers, reactive polymers or a mixture of two or three
of these components (112) on the first substrate (102) followed by one or more curing steps.

15. A method according to any one of claims 9-13, in which the spacers (4) are made by forming a photosensitive film (12) on the first substrate (2) followed by illumination and removal of those parts of the film (12) surrounding those parts that are to become the spacers (4).